

CLAIMS

What is claimed is:

5 1. A smart card reader, comprising:  
a detection circuit having a plurality of inputs for  
monitoring a plurality of operating conditions of the smart  
card reader, and a plurality of outputs for providing a  
plurality of sense signals; and  
10 a multiplexer having a plurality of sense inputs coupled  
to the plurality of outputs of the detection circuit, and an  
input for receiving a selection signal for routing one of the  
plurality of sense signals to an output as a status signal.

15 2. The smart card reader of claim 1, wherein the detection  
circuit includes a first voltage monitor coupled to a first  
input of the plurality of inputs for monitoring a first  
voltage level of first node, and providing a representative  
first sense signal of the plurality of sense signals at a  
first output of the plurality of outputs.

20 3. The smart card reader of claim 2, wherein the detection  
circuit includes a second voltage monitor coupled to a second  
input of the plurality of inputs for monitoring a second  
voltage level at a second node, and providing a second sense  
signal of the plurality of sense signals at a second output of  
the plurality of outputs.

25 4. The smart card reader of claim 3, wherein the status  
signal is representative of the first voltage level when the  
selection signal has a first value and representative of the  
second voltage level when the selection signal has a second  
value.

5. The smart card reader of claim 2, wherein the detection circuit includes a current monitor coupled to the first input of the plurality of inputs for sensing a magnitude of a current flowing through the first node, and providing a second 5 sense signal of the plurality of sense signals at a second output of the plurality of outputs.

6. The smart card reader of claim 1, wherein one of the plurality of inputs of the detection circuit is coupled for 10 detecting a smart card insertion, and one of the plurality of outputs provides one of the plurality of sense signals as a smart card insertion signal.

7. The smart card reader of claim 1, further comprising a semiconductor package for housing the detection circuit and the multiplexer.

8. An integrated circuit for controlling a smart card, comprising:

a monitoring circuit having first and second inputs for monitoring first and second operating conditions of the integrated circuit for producing first and second sense signals at first and second outputs, respectively; and

25 a multiplexer having first and second inputs respectively coupled to the first and second outputs of the monitoring circuit, and an input for receiving a selection signal for routing one of the first and second sense signals to an output as a status signal.

30 9. The integrated circuit of claim 8, wherein the first input of the monitoring circuit is coupled to a first node of the integrated circuit, and the first output produces the first sense signal to represent a first voltage level of the first node.

10. The integrated circuit of claim 9, wherein the second input of the monitoring circuit is coupled for monitoring a second node, and the second output produces the second sense signal to represent a second voltage level of the second node.

5

11. The integrated circuit of claim 10, wherein the first input of the monitoring circuit is coupled for sensing a current ( $I_{cc}$ ) flowing through the first node, and a third output of the detection circuit provides a third sense signal representative of a level of the current.

10

12. The integrated circuit of claim 11, wherein the monitoring circuit has a third input coupled for detecting whether the smart card is present for providing a representative fourth sense signal at a fourth output.

13

13. The integrated circuit of claim 12, wherein the multiplexer has third and fourth inputs coupled to the third and fourth outputs of the monitoring circuit, and the status signal is representative of the first, second, third and fourth sense signals when the selection signal has first, second, third and fourth values, respectively.

14. A method of operating a card reader, comprising the steps 25 of:

monitoring first and second operating conditions of the card reader to produce first and second sense signals, respectively; and

selecting between the first and second sense signals with 30 a selection signal to produce a status signal.

15. The method of claim 14, wherein the step of monitoring includes the step of sensing a first voltage at a first node to produce the first sense signal to represent a first voltage 35 level of the first node.

16. The method of claim 15, wherein the step of monitoring includes the step of detecting a current flowing through the first node to produce the second sense signal to represent the level of current.

5

17. The method of claim 15, wherein the step of monitoring further includes the step of sensing a second voltage at a second node to produce the second sense signal to represent a second voltage level of the second node.

10

18. The method of claim 14, wherein the step of selecting includes the steps of:

selecting the first operating condition with a first value of the selection signal to produce the first sense signal as the status signal; and

selecting the second operating condition with a second value of the selection signal to produce the second sense signal as the status signal.

0  
0  
0  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

19. The method of claim 18, further comprising the steps of:

monitoring a third operating condition of the card reader to produce a third sense signal; and

selecting the third operating condition with a third value of the selection signal to produce the third sense signal as the status signal.

25

20. The method of claim 14, wherein the step of monitoring includes the step of detecting whether a card is present in the card reader to produce the first sense signal.

30